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AUTHOR Lowry, Glenn R.
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ABSTRACT

Intended to strengthen the Information and Systems Sciences Program of Stockton State College, this 5-year developmental plan for 1980-1984 defines specific goals in three areas: (1) curriculum and faculty, (2) laboratory and equipment, and (3) faculty professional development. Recommendations are designed to bring about a stable faculty and a superior academic program by the fall of 1984. (JD)

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Proposed Five Year Developmental Plan

1980-1984

Information and Systems Sciences Program

Stockton State College

Submitted by:

Glenn R. Lowry
Instructor in Information &
Systems Sciences
March 7, 1979

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I. Introduction

The program in Information and Systems Sciences at Stockton, hereafter referred to as the INFO program, is currently serving approximately 897 undergraduate students. Of this number, approximately 127 are declared or intended INFO majors. The remainder are taking INFO program courses either to fulfill requirements in other programs or to satisfy personal developmental desires.

The INFO program has suffered from a lack of leadership and from a lack of faculty continuity. At present, three (3) faculty positions are open. They have been vacant since Fall of 1979. The shortage of faculty has imposed severe burdens on present faculty members in terms of increased teaching and preceptorial overloads. Faculty turnover has been quite high, due primarily to two factors: attractiveness of alternative employment and failure to gain tenure. Commercial firms have consistantly shown a willingness to offer an experienced faculty member approximately 50% more than they are earning at Stockton. Two former INFO faculty members, known personally by me, who would likely have chosen to remain in professional work were unable to do so because they were denied tenure. In each case, the two people under discussion, stated to me that they were unable to complete doctoral dissertations in the required five-year time limit primarily because of the heavy teaching and preceptorial load they were required to assume. Hence, non-competitive salaries have failed to

attract and hold many potentially desirable candidates. Over work of those people who did choose to serve on the faculty, paradoxically, precluded their being able to remain on that very faculty which required extraordinary efforts and sacrifices on their part.

Because of a lack of faculty stability and continuity, the educational experience of our students lacks the unified rationale that should result from being trained in any given academic department. Instead, the students' experience at Stockton has often been a pastiche of philosophies and approaches, resulting in a confusing multiplicity of contradictions, lacking in unity.

These conditions need not continue. There is much of value in the INFO program at Stockton that, if coordinated, improved upon and developed, under strong leadership and committed faculty, can result in a superior educational program in Information and Systems Sciences for students in New Jersey.

The Department of Higher Education has indicated support for the "Playship" concept, the centralization and concentration of educational facilities along discreet disciplinary lines at a specified, single state college. By consolidating the resources in any given discipline at one of the eight state colleges, duplication of basic resources can be eliminated, allowing those resources to be devoted to development of greater program depth in each discipline.

In the recommendations that follow, I am proceeding according to instructions, to conceive of "the best of all possible worlds." We shall assume that leadership problems at Stockton are overcome, that an effective, committed President, Vice-President and Dean of Professional Studies are recruited and hired. Further we shall assume that the three (3) remaining faculty lines in INFO are filled with committed, capable people. If these people are successfully recruited, a good deal of the problems in terms of faculty development, turnover and quality of educational experience provided to our student clientele can be successfully overcome. If we fail to deal with these difficulties, the INFO program will continue to operate from weakness and to provide a suboptimal quality of educational experience for the students for whom we are responsible.

What follows will not deal with the methods used to satisfactorally fill the leadership positions or faculty lines alluded to above. Those considerations are properly dealt with at a higher level.

II. Specific Goals

A. Curriculum and Faculty

Our objective during the next five years should be to develop the capability to deliver courses listed and described in the three current curricula which comprise the INFO curriculum. These curricula, the Information Science track, the Computer Systems track, and the Systems Science track, offer sufficient breadth of coverage and diversity of emphasis to accommodate

the needs of the majority of existing and potential students between now and 1984.

Many of the courses described in the current Stockton State College Bulletin are not being offered. Eleven courses listed on page 111 of that Bulletin as required courses in the Information Science track are not described in the course descriptions that follow the track requirements and, to my knowledge, have never been offered at Stockton. At least three of the courses listed as requirements for the Computer Systems track require the employment of adjunct faculty members in order to offer them. At least two courses required in the Systems Science track, Human Factors Design and Technical Cost Analysis, also require us to search outside the regular faculty to enable us to offer those courses. In addition, courses in standard programming languages are limited or curtailed due to insufficient faculty to offer them.

The solution to these difficulties lies, I feel, in recruiting and retaining sufficient faculty to offer the courses listed and described in our section of the Bulletin. I feel that the courses listed there, if offered, would provide an unusually strong and rich curriculum from which our students could choose, particularly at the undergraduate level.

At present, we are authorized seven (7) faculty lines. Of the seven positions, three are vacant, one faculty member is temporarily on leave, so that three regular faculty members are

covering thirty-one (31) sections offered in the Spring 1979 semester. Each of the three present faculty members currently teaching is teaching five (5) sections apiece, leaving sixteen (16) sections to be covered by adjuncts or cancelled. Over one half of our current sections are being offered by adjunct faculty. Thus, if the three vacant positions are filled and if the present faculty member on leave returns to teaching, the allotted faculty strength of seven (7) should be sufficient to allow us to begin offering most of our own courses in Fall 1979. We may then extend course offerings by the optimal, as opposed to the required, employment of adjunct faculty.

It is anticipated that ability of the INFO faculty to offer most, if not all, of its own courses will attract new students. It is felt that more students would be enrolled as INFO majors at present if the program had a better record of timely, dependable course delivery. In addition, the advance of computer technology is continuing at an accelerating rate and promises to increase the demands for people skilled in those very areas in which we are prepared or proposing to offer courses. Hence, I feel that a doubling of enrollment in INFO courses at Stockton by Fall 1984 is likely to occur.

I recommend the following faculty strength and distribution by Fall 1984 to enable the INFO Program to regularly deliver all courses described in our program literature:

3 lines in Information Science

6 lines in Computer Systems

3 lines in Systems Science

2 lines in service courses

for a total of fourteen (14) faculty lines. I recommend that ten (10) of those lines be tenured positions, that four (4) of them be untenured. I further recommend, however, that the absence of a tenured vacancy should not automatically preclude the continued employment of non-tenured faculty past the fifth year, as is currently the case. Non-tenured faculty should be permitted to retain their positions on a merit basis until a tenured position becomes vacant, at which time existing non-tenured faculty should be considered for tenure. This will impart greater stability and motivation to the INFO faculty, resulting in a more effective program.

B. Laboratory and Equipment

We are fortunate to have an existing laboratory facility available at the time of this report. This facility can provide the nucleus of an effective pedagogical aid and nexus of research efforts for the INFO program at Stockton. At present, the current laboratory is under-utilized. There is no one to staff it so that it is rarely available to students. Several basic items of equipment such as terminals, modums and line printers are absent while several more esoteric equipment items, such as two analog computers, a graphics terminal and a programmable calculator are

available. Unfortunately, to my knowledge, none of the existing faculty are able to operate some of the equipment that is available. Hopefully, newly recruited faculty will be able to utilize these items.

I recommend the following to improve our laboratory facility and its effectiveness as a teaching and research aid:

1. Addition of four (4) standard CRT terminals, telephone lines and modums, to enable students to communicate with ECN from the laboratory. These equipment configurations should be accompanied by four electronic line printers to facilitate online printout of ECN transactions and to facilitate online literature searches in the commercial databases in conjunction with courses in information retrieval.
2. Purchase of a minicomputer, such as a DEC PDP11, for instructional and experimental purposes is recommended.
3. Staffing the laboratory with a qualified director and staff. Laboratory should provide pedagogical support and research assistance. The laboratory and staff, along with the faculty, could serve as the basis of a research institute in information and systems sciences at Stockton.

4. Establishment of a program library, providing depth in the various subject areas of interest in information and systems sciences. The collection should be housed in or near the laboratory and should contain reference as well as monographic works. It should be maintained and organized by the laboratory staff.
5. Physical expansion of the laboratory to provide sufficient space for laboratory staff office space, installation of equipment, library, and a common room or area in which faculty, students and researchers might gather informally to intellectualize.

C. Faculty Professional Development

To provide for continuing professional development, administrative and financial support for the following activities normally associated with professional work and responsibility should be provided:

1. Continuing Education. Formal study and enrollment in course work can increase the breadth and depth of competence of faculty members. Prolonged association with other faculty members should germinate an interest in expanding one's competence within the discipline. Release time and financial support should be provided to encourage this activity.

2. Conferences. Conferences of information academics and other professionals provide fertile opportunities for the interchange of ideas on an informal basis. Current levels of funding preclude attendance of faculty at such conferences. Funding levels should be increased to provide opportunity for participation in the "invisible college."

3. Exchange Programs. Exchange programs provide an unparalleled opportunity for faculty to experience immersion in the profession in an unfamiliar cultural milieu. Such programs can result in considerable professional growth, significantly increasing the experiential base of the participating faculty member. Participation in exchange programs can also provide an avenue through which the reputation and prestige of the college can be increased.

4. Professional Organizations. Participation in professional organizations should be encouraged financially and administratively. The cost of organization dues should be borne by the college as their levels have risen above the level which faculty can afford. Active participation in these organizations such as serving on committees, presentation of papers and attendance at annual

meetings and conventions, should be encouraged by providing release time and financial support as appropriate. Service to the profession is a primary means for increasing the prestige and reputation of the college and of our program.

5. Other Release Time. Release time should be provided for research projects, publication and other intellectualization which will result in the development of a distinguished faculty and program.

D. Working Conditions

The conditions under which a faculty member labors affects the quality of his or her work. Specific suggestions for the improvement of working conditions are:

1. Reduction in Class Size. Current class size in some courses is too large to permit personal relationships to develop between faculty and students. Large classes often preclude reaching these less aggressible students who may need closer attention than is currently possible. The material of some upper level courses requires a smaller ratio of students to faculty to allow the professor to devote sufficient attention to individual students. Current class size precludes such attention, minimizing the professor's

potential for effectiveness. Some provision should be made for limiting the size of such classes if, indeed, our purpose is to provide a superior educational opportunity for our students.

2. Optimal Use of Student Evaluations of Teaching. The notion that student evaluations of teaching are a valid reflection of a professor's teaching ability is, at best, naive. They more realistically reflect how "popular" a professor is, which is all too often a measure of how lenient that professor is in terms of grades and how "entertaining" he or she may be. It is the writer's experience that the best teachers are often not the most popular, often being labelled as "hard" or "demanding". Students will, generally, perform to whatever level is set for them. It is the responsibility of a concerned faculty to insure that courses are sufficiently challenging to require that students grow and develop in order to pass them. Each course a student completes should result in increased understanding and a higher level of skill on the part of the student. These objectives can only

realistically be accomplished by rigorous, thorough courses of instruction. The way in which student evaluations of teaching are currently used creates a question in the mind of the professor. He or she must often choose between high academic standards in the classroom at the risk of low student ratings or of pandering to student desires for an easy course which is "fun". Failure to "please" students at Stockton can easily result in low ratings of the professor's ability which actually represent the resentment felt by the student who was forced to exert himself in order to pass a course. It takes little imagination to see how such a consideration can often result in faculty opting for a safer route of less demanding courses in order to insure their own employment. The continued reliance upon and forced utilization of student evaluations of teaching will continue to provide a possible source of compromise with academic excellence.

Consequently, I recommend that use of student evaluations be made:

a. voluntary

b. not part of the professor's personnel file

c. a confidential matter between a class and the individual professor.

The adoption of these recommendations just might help the SET's do what they purport to do: provide the professor with a realistic evaluation of the perception of their students of their teaching ability. It is felt that, so long as SET's are a mandatory, all important judgmental parameter, often outweighing peer evaluations, they will continue to lend themselves to compromising academic quality at Stockton. So long as students can view the inevitable SET as a means of gaining reprisals against faculty, the faculty will feel constrained to try harder to please students than to educate them. The result of a continuance of present policy in the use of SET's will be continued academic mediocrity at Stockton.

III. Summary

It is the writer's opinion that adoption of the recommendations made above will result in a superior program in information and systems sciences. Failure to address issues raised in the areas of curriculum, faculty strength, laboratory and research facilities, faculty development and working conditions will retard or prevent the realization of the goals of a stable faculty and superior academic program in information and systems sciences by Fall 1984 or at any other foreseeable time. Their

consideration and implementation will, however, do a great deal toward helping us to realize these goals. Most of us who have chosen academic careers have undoubtedly done so in the hope of being part of an outstanding institution of higher learning. We can realize this desire by joining an organization which has already achieved eminence or we can do so by laboring to help the organization of which we are a part deserve and achieve a position of leadership. The writer hopes that we at Stockton will be helped and encouraged in our endeavors to build and develop an outstanding program in information and systems sciences.